REMARKS

Claim 1 has been amended so as to clearly distinguish the manufacture of the blood and tissue compatible membrane according to the invention from those of the cited prior art.

To form the two-layer membrane comprising on one side a blood-compatible surface and, at the opposite side, a tissue-compatible surface layer in accordance with the present invention, a first polymer solution of a blood-compatible polymer comprising at least one of the polyacrylnitrile-copolymers ANNVP20, heparinized ANAPMA and polyacrylnitrile and a second polymer solution comprising at least one of the polyacrilnitrile copolymer ANNVP 5 and polyacrylnitrile are formed separately from each other and the two solutions are then co-extruded in the form of a layered polymer solution compound arrangement into a coagulation bath where the extruded arrangement is subjected to phase inversion thereby forming a double layer membrane with a blood-compatible material surface at one side thereof and a tissue-compatible surface at the other side thereof.

The polyacrylnitrile-copolymer ANNVP 5 and the blood compatible polyacrylnitrile-copolymer ANNVP 20 are mentioned on page 11, lines 2, 10 of the description and also in the table on page 10 as tissue-compatible material. As another blood-compatible material, heparinized ANAPMA is mentioned in example 3.

These materials are not mentioned in the references cited by the Examiner.

Claim 1 has further been amended so as to make it clearer that the separation membranes comprise a separation layer system including at one side a blood-compatible layer and on the other side, a tissue-compatible layer so that at one side, blood cells are deposited and on the other side, there are favorable conditions for the deposition of adhesion-dependent tissue cells. This concept is certainly not disclosed in, or in any way apparent from, Koros (US 5 399 380).

While Koros discloses a method of producing a multiplayer membrane, this reference does not include any mention of opposite blood- and tissue-compatible layers. This is unreasonably read into Koros by the Examiner.

Meyst et al. (US 4 283 289) refers to blood-compatible fibers and Brenner (US 4 973 320) refers to tissue compatible devices, but to say as the Examiner does, that the references Meyst et al. and Brenner et al. specifically teach that the first and second polymers used in

Koros are blood compatible and tissue compatible is pure speculation. The fact that blood or tissue compatible materials exist is of course known, but this certainly does not mean that a method of manufacturing a membrane with blood compatible and tissue compatible opposite surfaces is known.

In any case, Applicants have limited claim 1 to a method of making a double layer membrane with blood and tissue compatible layers by co-extruding first and second polymer solutions comprising, in one case, at least some of the polyacrylnitrile-copolymers ANNVP 20, heparinized ANAPMA and polyacrylnitrile and, in the other case, at least one of the polyacrylnitrile-copolymer ANNVP 5 and polyacrylnitrile, that is, a mixture of the two, into a coagulation bath so as to form in the coagulation bath a double layer membrane with opposite blood and, respectively, tissue-compatible surfaces which is subjected to phase inversion to at least partially free the membrane from all non-membrane forming components.

It has been found, that such membranes enhance the deposition of blood cells on one side and provide for favorable for favorable deposit conditions foe tissue cells on the other side, so that such membranes are particularly suitable for the use as carrier membranes in hybrid organs. The expression "Carrier membranes encompasses the concept that the respective blood and tissue cells attach themselves to the membrane and remain attached thereto while fulfilling their organic functions.

The blood compatible surface and the tissue compatible surface of such a membrane are formed in this case by materials not disclosed in any of the references cited by the Examiner so that she certainly cannot say that the use of the materials chosen by the inventors as particularly advantageous was known in, or is obvious from, the cited prior art.

Reconsideration and allowance of claim 1 as amended and also of claims 2 to 11 which are dependent directly or indirectly on claim 1 is respectfully requested.

Respectfully submitted,

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